

### **3. Affected Environment**

#### **3.1 Introduction**

The affected environment succinctly describes the relevant resources of the areas that would affect or that would be affected by the alternatives if they were implemented. In conjunction with the description of the no action alternative in Chapter 2 and with the predicted effects of the no action alternative in Chapter 4, this chapter establishes the scientific baselines against which the decision maker and the public can compare the effects of the preferred action alternative.

#### **3.2 Physical Resources**

##### *3.2.1 Soil Resources*

There is no soil survey for Brewster County available from the NRCS (formerly the Soil Conservation Service). A soil survey of Big Bend National Park was completed by the Soil Conservation Service in 1985. However, the project area lies in a portion of the park that was acquired after the survey was completed; therefore, no soil survey of the project area is available. According to the BIBE survey of 1985, other areas in the region that resemble the project area in bedrock type, topography, elevation, slope and vegetation are described with the soil type Lajitas-Rock outcrop, hilly.

This soil type typically consists of brown, very cobbly loam about seven inches thick resting abruptly on igneous bedrock. This soil type is typically thin (<seven inches), weak and friable. These soils are well drained, with moderate permeability. The available water capacity is very low and the rooting zone is shallow to very shallow. Wind and water erosion are only slight hazards because of the gravel and cobbles. (See Appendix F, Photograph 12) The gravel and cobbles constitute the desert soil pavement that protects the soil beneath from wind and water erosion (Science News, 2004).

##### *3.2.2 Visual Resources*

Mountain peaks are traditionally a place where visitors to the park can climb and achieve an expansive view of the park and surrounding areas. Rosillo Peak is one of the few mountain peaks in the park with an unimpaired view. The view from Rosillo Peak encompasses 360° with unimpaired views of the surrounding desert and mountain ranges. The hike to the peak is recommended in Hiking Texas because of the pristine nature of the Peak and the expansive views (Parent, 1992). However, roads and development to the south and northwest can be observed from the peak.

##### *3.2.3 Archeological Resources*

Prior to the acquisition of Harte Ranch in 1989, which included Rosillo Peak, the THC conducted an archaeological reconnaissance of the Rosillos Mountains in 1979-1980. The THC identified and recorded 62 prehistoric and historic sites in the Rosillos Mountains, including the SAL Site 41BS762 on Rosillo Peak. In accordance with ARPA, to the extent possible, the precise location and nature of this SAL will not be disclosed in this EA.

##### *3.2.4 Ethnographic Resources*

Coordination was conducted with several American Indian tribes that were identified by the NPS as having concerns regarding ethnographic resources, such as historical significance, ceremonial sites, traditional sacred places, and special places in the natural world, which may be associated

with the proposed site. Mountain peaks are generally considered special places and/or sacred sites for many American Indians. These tribes include the Apache Tribe of Oklahoma, Blackfeet Tribe, Comanche Tribe of Oklahoma, Kickapoo Traditional Tribe of Texas, Kiowa Tribe of Oklahoma, Mescalero Apache Tribe and the Ysleta del Sur Pueblo Tribe.

Rosillo Peak lies within the Lipan Apache Tribe traditional homelands. The Lipan Apache are one of three groups that make up the Mescalero Apache Tribe. Mountain peaks are sacred places to the Mescalero Apache people and are places of refuge, homes of gods and visions and are regarded as centers of power. The proposed action would affect the spiritual nature of the peak to the Mescalero Apache people.

### *3.2.5 Wilderness Resources*

The Wilderness Act of 1964 defines a wilderness as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor and does not remain." It is further defined as "an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable, has outstanding opportunities for solitude or a primitive and unconfined type of recreation and has at least five thousand acres of land or is sufficient in size as to make practicable its preservation and use in an unimpaired condition."

The portion of the Rosillos Mountains where the project area is located was acquired by the NPS in 1989. This acquisition encompassed approximately 50,000 acres. Approximately 10,000 acres in the Rosillos Mountains was subsequently acquired by the NPS. The total Rosillos Mountains addition encompassed approximately 60,000 acres. Big Bend National Park currently manages wilderness areas with their Backcountry Management Plan of 1995. This plan shows the Rosillo Peak project area located in "Non-wilderness" backcountry.

A Wilderness Suitability Assessment was conducted for this acquisition in September 2002. A Wilderness Suitability Assessment is not administratively complete until it is transmitted from the NPS Regional Director to the NPS Director in Washington D.C., approved by the NPS Director and published in the Federal Register. The Wilderness Suitability Assessment is not administratively complete as of the date of this Draft EA. The Superintendent of BIBE determined that the area meets Suitability standards as defined by the Wilderness Act and NPS policies, and the area will be managed as suitable wilderness.

According to NPS Management policy, "the National Park Service will take no action that would diminish the wilderness suitability of an area possessing wilderness characteristics until the legislative process of wilderness designation has been completed. Until that time, management decisions pertaining to land qualifying as wilderness will be made in expectation of eventual wilderness designation." "For the purposes of applying these policies, the term "wilderness" will include the categories of suitable, study, proposed, recommended, and designated wilderness." (NPS General Management Policies Section 6.3.1). A minimum requirement analysis was conducted for the proposed action (See Minimum Requirement Worksheet, Appendix E).

The NPS will continue to undertake a Wilderness Study of all lands that have been determined to be suitable as a result of the wilderness suitability assessment. Wilderness studies will be supported by appropriate documentation of compliance with NEPA and NHPA. The Council on Environmental Quality requires environmental impact statements for wilderness studies that will result in recommendations for designations (i. e., proposals for legislation to designate as wilderness).

The suitable wilderness area is divided into two units, the North Rosillos Unit and the Nine Point Unit, divided by the 14-mile Terlingua Ranch Road. The Nine Point unit consists of approximately 40,000 acres. The North Rosillos Unit contains approximately 20,000 suitable acres, including a 135-acre power line corridor and 475 acres in non-federal ownership. The project area is located in this unit.

### 3.3 Biological Resource

#### 3.3.1 Vegetation

During the field reconnaissance conducted by a qualified biologist on November 21, 2003, cacti and succulent species observed included Thompson's yucca (*Yucca rostrata*), pitaya and rainbow cacti (*Echinocereus* sp.), pricklypear cactus (*Opuntia engelmannii*), chino grama grass (*Bouteloua ramosa*), beargrass (*Nolina erumpens*), creosotebush (*Larrea tridentata*) and cane cholla (*Opuntia imbricata*). Resurrection plant, a club moss, (*Selaginella lepidophylla*) was observed around boulders.

Other plants observed, by the NPS Botanist on January 28, 2002, on the peak included Harvard's prune (*Prunus harvardii*), skeleton goldeneye (*Viguiera stenoloba*), Wright's wildbuckwheat (*Eriogonum wrightii*) and narrowleaf globemallow (*Sphaeraleca angustifolia*).

#### 3.3.2 Wildlife

The Chihuahuan Desert is home to many species of birds, mammals, reptiles, and amphibians. A prairie falcon was observed near the peak. Habitat types vary greatly depending on elevation and proximity to water sources. Mountain peaks are generally characterized by rock outcroppings and sparse, low-lying vegetation such as cacti. NPS staff has observed evidence of white-tailed deer and javelina use of the peak. Other large mammals that likely use the peak include bobcats and mountain lions.

#### 3.3.3 Threatened and Endangered Species

A list of threatened and endangered species that may occur in Brewster County, Texas, is included as Table 3.1.

Wildlife: Although there are many species listed for Brewster County, not all of these species are found in BIBE. The federally listed threatened and endangered wildlife species that may potentially occur at the proposed site include the Mexican long-nosed bat (*Leptonycteris nivalis*) and northern aplomado falcon (*Falco femoralis septentrionalis*). The least tern (*Sterna antillarum*), whooping crane (*Grus americana*), bald eagle (*Haliaeetus leucocephalus*) and piping plover (*Charadrius melodus*) are listed as potential migrants through Brewster County.

In addition to the federally-listed species, state listed wildlife species that may potentially occur at the proposed site include the American peregrine falcon (*Falco peregrinus*), zone-tailed hawk (*Buteo albonotatus*), greater long-nosed bat (*Leptonycteris nivalis*), spotted bat (*Euderma maculatum*), reticulated gecko (*Coleonyx reticulatus*), Texas horned lizard (*Phrynosoma cornutum*), and the Texas lyre snake (*Trimorphodon biscutatus*).

Plants: Although there are many species listed for Brewster County, not all of these species are found in BIBE. The federally listed threatened and endangered plant species that may potentially occur at the proposed site is the Davis' green pitaya (*Echinocereus viridiflorus* var. *davisii*). The State of Texas lists the same species.

## **3.4 Economic and Social Resources**

### *3.4.1 Health and Safety*

BIBE receives approximately 330,000 visitors per year and employs approximately 297 permanent and seasonal employees and volunteers. A large portion of the northern part of BIBE has unreliable or no radio coverage. The health and safety of visitors and employees is the primary concern of NPS, BIBE and other law enforcement agencies.

### *3.4.2 Recreational Opportunities and Experience*

The accessibility of BIBE provides opportunities to experience the park through many types of recreational activities. Recreational activities available at Rosillo Peak include backpacking, hiking, camping, wildlife watching, photography and solitude. There are no maintained trails to Rosillo Peak. The hike to the peak is strenuous and recommended for very experienced hikers only. Camping on the peak is difficult due to the rocky soil and desert vegetation.

In addition, mountain peaks represent a unique environment for all human beings to meditate and connect with the natural world. People are increasingly seeking these sites in this modern age of technology and threats of terrorism. The public has unrestricted access to Rosillo and Emory Peaks, as well as most areas of the park.

**Table 3.1 Threatened and Endangered Species (Brewster County)**

Common Name	Scientific Name	State Status	Federal Status
Bunched cory cactus	<i>Coryphantha ramillosa</i>	T	T
**Davis' green pitaya	<i>Echniocereus vridiflorus</i> var. <i>davisii</i>	E	E
Chisos Mountain hedgehog cactus	<i>Echinocereus chisoensis</i> var. <i>chisoensis</i>	T	T
Hinkley oak	<i>Quercus hinkleyi</i>	T	T
Lloyd's mariposa cactus	<i>Echinomastus mariposensis</i>	T	T
Guadalupe fescue	<i>Festuca ligulata</i>	NL	C
Terlingua Creek cat's eye	<i>Cryptantha crassipes</i>	E	E
Black-capped Vireo	<i>Vireo atricapilla</i>	E	E
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E	E
**American peregrine falcon	<i>Falco peregrinus anatum</i>	E	DL
Arctic peregrine falcon	<i>Falco peregrinus tundrius</i>	E	DL
Common black hawk	<i>Buteogallus anthracinus</i>	T	NL
Gray hawk	<i>Asturina nitida</i>	T	NL
**Northern aplomado falcon	<i>Falco femoralis septentrionalis</i>	E	E
White-tailed hawk	<i>Buteo albicaudatus</i>	T	NL
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	NL	C
**Zone-tailed hawk	<i>Buteo albonotatus</i>	T	NL
Big Bend gambusia	<i>Gambusia gaigei</i>	E	E
Blue sucker	<i>Cycleptus elongates</i>	T	NL
Chihuahua shiner	<i>Notropis chihuahua</i>	T	NL
Conchos pupfish	<i>Cyprinodon eximus</i>	T	NL
Mexican stoneroller	<i>Campostoma ornatum</i>	T	NL
Black bear	<i>Ursus americanus</i>	T	NL
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	NL	C
Gray wolf	<i>Canis lupus</i>	E	E
**Greater long-nosed bat	<i>Leptonycteris nivalis</i>	E	E
**Spotted bat	<i>Euderma maculatum</i>	T	NL
Ocelot	<i>Felis pardalis</i>	E	E
White-nosed coati	<i>Nasua narica</i>	T	NL
Trans-pecos black-headed snake	<i>Tantilla cucullata</i>	T	NL
**Reticulated gecko	<i>Coleonyx reticulatus</i>	T	NL
**Texas horned lizard	<i>Phrynosoma cornutum</i>	T	NL
**Texas lyre snake	<i>Trimorphodon bisutatus</i>	T	NL
Texas tortoise	<i>Gopherus berlanderi</i>	T	NL
Texas hornshell (clam)	<i>Popenaias popei</i>	NL	C

E = Endangered

T = Threatened

DL = De-listed

NL = Not listed

C = Candidate

\*\* = Could potentially occur on Rosillo Peak